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RXTE broadband X-ray spectra of intermediate polars and white dwarf mass estimates

Suleimanov V., Revnivtsev M., Ritter H.

Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

We present results of an analysis of broadband X-ray spectra of 14 intermediate polars obtained with the RXTE observatory (PCA and HEXTE spectrometers, 3-100 keV). For this we have calculated theoretical models of the structure and the emergent spectrum of the post-shock region of intermediate polars. By fitting theoretical model spectra to the observed spectra we derive estimates for the masses of the white dwarfs. We compare the resulting masses with masses obtained by other authors and other methods. The masses obtained by us are smaller than the masses obtained by using PCA and GINGA data, and they are in good agreement with the masses derived from radial velocity studies. © ESO 2005.

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Keywords

Stars: binaries: close, Stars: binaries: spectroscopic, Stars: novae, cataclysmic variables, X-ray: binaries